

**ABSTRACT OF THE DISCLOSURE**

Atomic renaming and moving of data files, while permitting lock-free look-ups to the data files, is disclosed. A temporary record may be created within a hash chain encompassing a record for a data file and corresponding to a location of the data file

5 within a computer file system. The temporary record is linked within the hash chain so that the temporary record points to the same records to which the record for the data file points. The record for the data file is renamed with a new name, and/or moved to a new location within the computer file system, and the temporary record is removed from the hash chain. Before the temporary record is removed, look-ups of the data file resolve to

10 the temporary record, the temporary record causing the look-ups to wait until the record for the data file has been renamed and/or moved and the temporary record removed.